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## (54) Title: TRIAZOLOPYRIMIDINE DERIVATIVES AS GLYCOGEN SYNTHASE KINASE 3 INHIBITORS

$$\begin{array}{c|c}
R^3 & R^2 \\
X_2 & X_1 \\
X_1 & X_2 \\
N & N
\end{array}$$

$$\begin{array}{c|c}
R^2 & X_1 & X_2 \\
X_1 & X_1 & X_2 \\
N & N
\end{array}$$

$$\begin{array}{c|c}
N & N & N & N
\end{array}$$

$$\begin{array}{c|c}
N & N & N & N
\end{array}$$

(57) Abstract: This invention concerns compounds of formula (I) a N-oxide, a pharmaceutically acceptable addition salt, a quaternary amine and a stereochemically isomeric form thereof, wherein ring A represents phenyl, pyridyl, pyrimidinyl, pyridazinyl or pyrazinyl; R¹ represents hydrogen; aryl; formyl; C<sub>1-6</sub> alkylcarbonyl; C<sub>1-6</sub> alkyl; C<sub>1-6</sub> alkyloxycarbonyl; C<sub>1-6</sub> alkyls substituted with formyl, C<sub>1-6</sub>alkylcarbonyl, C<sub>1-6</sub>alkyloxycarbonyl, C<sub>1-6</sub>alkylcarbonytoxy; or optionally substituted C<sub>1-6</sub> alkyloxyCl-6alkylcarbonyl; X₁ represents a direct bond; -(CH<sub>2</sub>)<sub>n3</sub>- or -(CH<sub>2</sub>)<sub>n4</sub>- X<sub>1a</sub>-X<sub>1b</sub>-; R² represents optionally substituted C<sub>3-7</sub>CYCloalkyl; phenyl; a 4, 5, 6- or 7-membered monocyclic heterocycle containing at least one heteroatorn selected from 0, S or N; benzoxazolyl or a radical of formula (a-1); X₂ represents a direct bond; -NR¹-NR¹-(CH<sub>2</sub>)<sub>N3</sub>-; -0-; -0-(CH<sub>2</sub>)<sub>n3</sub>-; -C(=O)-; -C(=O)- (CH<sub>2</sub>)<sub>n3</sub>-; -C(=O)-NR⁵-(CH<sub>2</sub>)<sub>n3</sub>-; -C(=S)-; -S-; -S(=O)<sub>n1</sub>-; -(CH<sub>2</sub>)<sub>n3</sub>-; -(CH<sub>2</sub>)<sub>n4</sub>-X<sub>1a</sub>-X<sub>1b</sub>-; -X<sub>1a</sub>-X<sub>1b</sub>-(CH<sub>2</sub>)<sub>n4</sub>-; -S(=O)<sub>n1</sub>-NR⁵-(CH<sub>2</sub>)<sub>n3</sub>-NR⁵- or -S(=O)<sub>n1</sub>-,NR⁵-(CH<sub>2</sub>)<sub>n3</sub>-; R³ represents an optionally substituted 5-or 6-membered monocyclic heterocycle containing at least one heteroatom selected from 0, S or N, or a 9-or 10-membered bicyclic heterocycle containing

at least one heteroatom selected from 0, S or N;  $R^4$  represents hydrogen; halo; hydroxy; optionally substituted  $C_{1.4}$ alkyl; optionally substituted  $C_{2.4}$ alkenyl or  $C_{2.4}$ alkynyl; polyhalo $C_{1.3}$ alkyl; optionally substituted  $C_{1.4}$ alkyloxy; polyhalo $C_{1.3}$ alkyloxy;  $C_{1.4}$ alkyloxy; polyhalo $C_{1.3}$ alkylthio; polyhalo $C_{1.3}$ alkylthio;  $C_{1.4}$ alkyloxycarbonyl;  $C_{1.4}$ alkyloxybonyloxy;  $C_{1.4}$ alkyloarbonyl; polyhalo $C_{1.4}$ alkyloarbonyl; nitro; cyano; carboxyl;  $NR^9R^{10}$ ;  $C(=O)NR^9R^{10}$ ;  $-NR^5-C(=O)-NR^9R^{10}$ ;  $-NR^5-C(=O)-R^5$ ;  $-S(=O)_{n1}$ ,  $-R^{11}$  -S-CN;  $-NR^5$  -CN; their use, pharmaceutical compositions comprising them and processes for their preparation.

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